Photolysis of ClO Dimer at 2S4 nm

W B DeMore and K J Huder (Jet Propulsion Laboratory, California Institute of Technology, Pasadena, (A 91 109; 818-354-7287)

The ClO dimer, ClOOCl, is important in the photochemistry of polar ozone depletion. It is formal by tbc self-reaction of ClO radicals at low temperatures, such as those of the polar night. When sunlight appears, the dimer will bc photo] yzed. Two reaction paths arc considered possible. Onc yields Cl and ClOO radicals and contributes to ozone depletion, whereas the other yields inert (10. in this work the photolysis products of ClOOCl were determined at 2.54 nm at -78°C . The photolysis of Cl_2O at 254 nm yielded (10 radicals which formed ClO dimer at the low temperature of the experiment. By following the decay of Cl_2O with and without dimer present the distinction between the two photolysis paths was possible. The results indicate that at 2S4 nm Cl and ClOO are the dominant products,

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3. (a) K J Huder
MS 183-901
JPI .
Oak Grove Dr. 4800
Pasadena, CA 91109

(b) Tel.: 818-3 S4-7287

(c) Fax: 818-393-444S

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(b) 0340 Middle atmosphere-composition and chemistry

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